Amendments to the Claims:

The following listing of claims replaces all prior versions and listings of the claims in this application.

Listing of the Claims:

Claim 1 (Currently Amended): A process for producing a poly(arylene sulfide) by polymerizing a sulfur source and a dihalo-aromatic compound in the presence of an alkali metal hydroxide in an organic amide solvent, which comprises:

(1) a dehydration step of charging, into a reaction vessel, the organic amide solvent and the sulfur source ~~including~~ comprising an alkali metal hydrosulfide alone or a mixture of 90 to 99.5 mol% of an alkali metal hydrosulfide and 0.5 to 10 mol% of an alkali metal sulfide, and a part of an overall charged amount of the alkali metal hydroxide as needed, and heating a mixture containing these components to discharge at least a part of a distillate containing water from the interior of the system containing the mixture to the exterior of the system, and

(2) a polymerization step of mixing the mixture remaining within the system after the dehydration step with a dihalo-aromatic compound, heating a mixture for polymerization reaction containing these components to subject the sulfur source (hereinafter referred to as "available sulfur source") and the dihalo-aromatic compound to a polymerization reaction, and adding the alkali metal hydroxide to the mixture for polymerization reaction continuously or in portions to control the pH of the mixture for polymerization reaction within a range of from 7 to 12.5 from the beginning to the end of the polymerization reaction, wherein in the polymerization step, the pH of the mixture for polymerization reaction is measured by collecting the reaction mixture, diluting it to 1/10 with ion-exchanged water and measuring the pH of the diluted solution.

Claim 2 (Canceled).

Claim 3 (Currently Amended): The production process according to claim 1, wherein in the dehydration step, a mixture of 97 to 99.5 mol% of the alkali metal hydrosulfide and 0.5 to 3 mol% of an alkali metal sulfide is charged as the sulfur source ~~including~~ comprising the alkali metal hydrosulfide.

Claim 4 (Original): The production process according to claim 1, wherein in the dehydration step, the mixture is heated to 100 to 250°C to discharge at least a part of the distillate containing water from the interior of the system containing the mixture to the exterior of the system.

Claim 5 (Original): The production process according to claim 1, wherein in the polymerization step, the alkali metal hydroxide is added to the mixture for polymerization reaction continuously or in portions to control the pH of the mixture for polymerization reaction within a range of from 9 to 12.1 from the beginning to the end of the polymerization reaction.

Claim 6 (Currently Amended): The production process according to claim 1, wherein in the polymerization step, the alkali metal hydroxide is added to the mixture for polymerization reaction continuously or in portions so as to satisfy the following expression (I):

$$0 \leq y - x < 1.1 \qquad (I)$$

wherein y = ∑ OH/available S, (∑ OH being a cumulative molar amount of a molar amount of an alkali metal sulfide contained in the sulfur source charged in the dehydration step, a molar amount of the alkali metal hydroxide added in the dehydration step, a molar amount of hydrogen sulfide volatilized out of the system in the dehydration step, and a molar amount of the alkali metal hydroxide added continuously or in portions in the polymerization step, and the available S being a molar amount of an available sulfur source contained in the mixture remaining in the system after the dehydration step), and x is a consumption rate of the dihalo-aromatic compound, i.e., (a molar amount of the dihalo-aromatic compound consumed in the polymerization step)/(a molar amount of the dihalo-aromatic compound charged)].

Claim 7 (Original): The production process according to claim 6, wherein the alkali metal hydroxide is added to the mixture for polymerization reaction continuously or in portions in such a manner that the (y – x) value in the expression (I) satisfies a range of from 0 to smaller than 0.2.

Claim 8 (Currently Amended): The production process according to claim 1, wherein in the production step, the polymerization reaction is conducted by an at least two-stage polymerization process comprising:

(A) Step 1 of heating the mixture for polymerization reaction to 170 to 270°C in the presence of water in a proportion of 0.0 to 2.0 mol per mol of the available sulfur source to conduct a polymerization reaction, thereby forming a prepolymer ~~that~~ wherein a conversion of the dihalo-aromatic compound is 50 to 98%, and

(B) Step 2 of controlling the amount of water in the mixture for polymerization reaction so as to bring about a state that water exists in a proportion of 2.0 to 10 mol per mol of the available sulfur source, and heating the reaction system to 245 to 290°C, thereby continuing the polymerization reaction.

Claim 9 (Original): The production process according to claim 1, wherein in the production step, the dihalo-aromatic compound is mixed in such a manner that the amount of the dihalo-aromatic compound charged falls within a range of from 0.9 to 1.50 mol per mol of the available sulfur source.

Claim 10 (Original): The production process according to claim 9, wherein in the production step, the dihalo-aromatic compound is mixed in such a manner that the amount of the dihalo-aromatic compound charged falls within a range of from 1.00 to 1.09 mol per mol of the available sulfur source.

Claim 11 (Currently Amended): The production process according to claim 1, wherein in the dehydration step and production step, the overall charged amount of the alkali metal hydroxide is controlled in such a manner that the $\sum$ OH value, (~~i.e., being~~ a cumulative molar amount of a molar amount of an alkali metal sulfide contained in the sulfur source charged in the dehydration step, a molar amount of the alkali metal hydroxide added in the dehydration step, a molar amount of hydrogen sulfide volatilized out of the system in the dehydration step, and a molar amount of the alkali metal hydroxide added continuously or in portions in the polymerization step, ~~and the available S being a molar amount of an available sulfur source~~

~~contained in the mixture remaining in the system after the dehydration step)~~ falls within a range of from 1.0 to 1.1 mol per mol of the available sulfur source contained in the mixture remaining in the system after the dehydration step.

Claim 12 (Original): The production process according to claim 11, wherein in the dehydration step and production step, the overall charged amount of the alkali metal hydroxide is controlled in such a manner that the $\sum$ OH value falls within a range of from 1.02 to 1.08 mol per mol of the available sulfur source.

Claims 13-20 (Canceled).